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Current Economic Analysis I-21

Industrial Fishery Products

Market Review and Outlook

Market Research and Services Division
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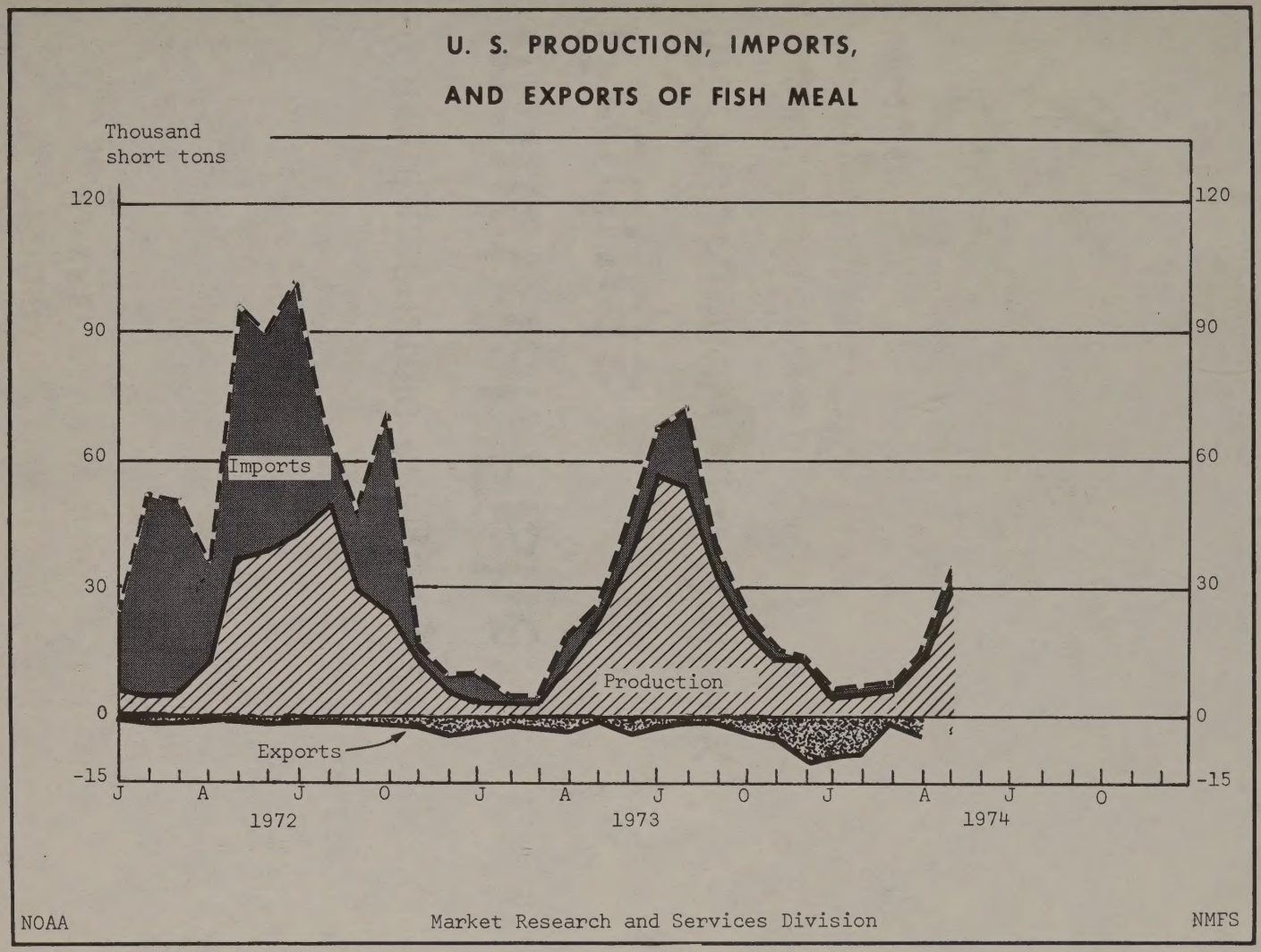
U. S. PRODUCTION, IMPORTS,
AND EXPORTS OF FISH MEAL
Thousand
short tons
120
90
60
30
0
-15
Imports
Production
Exports
J A J O J A J O J A J O
1972
1973
1974
NOAA
Market Research and Services Division
NMFS

Figure 1

INDUSTRIAL FISHERY PRODUCTS MARKET REVIEW AND OUTLOOK

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SUMMARY

FISH MEAL

Supplies of fish meal in the world improved in January-May 1974 because of the revival of Peru's production. Supplies in the United States not affected because no meal imported from Peru. U.S. production higher in the first 5 months of 1974 than a year ago but imports lowest in decades. Exports of fish meal in January-May two thirds of the total 1973 exports.

World production of fish meal in January-April of 1974 more than a year before. Peru's fish meal production about half of normal. FEO[1] countries exported in January-April about the same as a year ago.

Prices of domestic fish meal in May only half of January average. No quotations for Peruvian meal due to lack of sales.

Outlook is gradual improvement in world supply situation. Production in Peru expected to be about 440,000 metric tons in October-December 1974. U.S. supplies for the rest of 1974 still depend mainly on domestic production. Production up; price decline expected to end. Fish meal use relatively low in feed rations.

FISH SOLUBLES

Supplies of fish solubles in January-May 1974 up from a year ago. Demand strong in the early part of the year. Outlook for the rest of 1974: high production, softer demand.

FISH OIL

Production of fish oil in January-May 1974 up 72 percent from the year before. Industrial use increased. Exports down owing to exhausted supplies. Prices record high. Outlook for the rest of 1974 is for continuing strong world demand. Exports high especially during third quarter.

1/ Fishmeal Exporters Organization: member countries are Angola, Chile, Iceland, Norway, Peru, and South Africa.

FISH MEAL

REVIEW

Supplies

Fish meal supplies in the United States during the first 5 months of 1974 were almost unaffected by the revival of fish meal production in Peru. U.S. imports for January-May were the lowest since 1946 for this period, and exports of fish meal, which were important in 1973, continued relatively high during the beginning months of the year. The available quantity of fish meal for domestic use (excluding carryover stocks that are not reported and deducting quantities exported) was 71,100 tons[2/] in January-May. The comparable quantity last year was 55,700 tons and 261,900 tons in January-May 1972.

Fish Meal Production in the United States

Total production of fish meal in the United States during January-May 1974 was up considerably from the comparable months of 1973. The domestic industry produced about 63,600 tons of fish meal during the first 5 months of 1974 compared with 48,300 tons a year ago (table 1). Menhaden meal production during

Table 1.--Supplies[1/], production, and imports of fish meal in the United States, by month, 1972-74[2/]

Month	Supplies			Production			Imports		
	1972	1973	1974 3/	1972	1973	1974 3/	1972	1973	1974
	Thousand short tons								
January	24.6	10.3	6.4	6.3	3.0	5.5	18.3	7.3	1.0
February	52.9	5.2	7.1	4.7	3.6	6.1	48.1	1.6	1.0
March	51.1	5.5	8.2	5.5	5.1	6.7	45.6	0.4	1.5
April	36.8	18.9	14.9	12.9	12.6	12.8	23.9	6.3	2.1
May	96.2	26.5	33.6	37.0	24.1	31.5	59.2	2.4	2.0
June	90.1	44.1		38.6	38.9		51.4	5.2	
July	101.9	68.3		42.5	56.8		59.4	11.5	
August	67.6	72.1		52.4	51.2		15.3	20.9	
September	47.4	40.5		29.6	35.2		17.8	5.3	
October	71.1	26.1		24.9	21.2		46.2	5.0	
November	15.9	15.5		13.6	14.1		2.3	1.4	
December	10.5	13.8		6.1	13.8		4.5	1.2	
Total 4/	666.1	346.6		274.1	279.4		392.0	68.5	

1/ Production plus imports; exports not deducted.
2/ Excludes meal made from shellfish.
3/ Preliminary.
4/ Figures may not add to total because of rounding.

2/ In general, domestic figures are expressed in short tons and foreign figures in metric tons. Short tons are used in this report unless otherwise specified. To convert metric tons to short tons multiply by 1.1023.

the period totaled about 30,700 tons compared with 17,700 tons a year ago (table 2). The improvement over 1973 was due to more favorable weather in the Gulf area and increased fishing effort. Spring floods did not hamper fishing this year, and 5 more vessels in the Gulf menhaden fleet helped contribute to the increase. Landings on the Atlantic Coast also were up (table 3).

Table 2.--U.S. fish meal production by raw material source, 1973-74

Month	Source				Total 3/
	Menhaden 1/	Anchovy	Tuna and mackerel	Unclassified	
	- - - - - Thousand short tons - - - -				
1973					
January	2/	2/	2.0	1.0	3.0
February	-	-	2.6	1.0	3.6
March	-	-	3.2	1.9	5.1
April	2.6	3.9	3.8	2.3	12.6
May	15.1	2.8	3.7	2.4	24.1
1974					
January	-	0.8	3.3	1.4	5.5
February	-	2.1	2.6	1.4	6.1
March	2/	0.5	4.7	1.5	6.7
April	5.7	1.3	4.0	1.8	12.8
May	25.0	-	4.4	2.2	31.5

1/ May include small quantities made from other species.
2/ Included with unclassified
3/ Figures may not add to total because of rounding.
Data for 1973 and 1974 preliminary.

Table 3.--Menhaden landings by area.

Area	January - May			Change from 1973 to 1974
	1972	1973	1974	
	- - - Million lb - - -			
Atlantic Coast	33.3	21.4	34.1	+ 59.3
Gulf Coast	307.2	147.7	252.4	+ 70.9
Total 1/	340.4	169.0	286.5	+ 69.5

1/ Figures may not add to total because of rounding.

Production of tuna and mackerel meal increased also. About 19,000 tons of tuna and mackerel meal was produced in January-May 1974 compared with 15,300 tons a year ago. Higher production of canned tuna was the major reason for increased availability of scrap for fish meal production.

California fish reduction plants reported anchovy meal production in January-May 1974 at 7,800 tons compared with 6,800 tons a year ago. The 1973/74 fishing season for California anchovy closed in the southern permit area on April 30 and in the northern permit area on May 15. Preliminary landings reported by California Department of Fish and Game for the full 1973/74 season were about 121,000 tons compared with 75,000 tons landed during the 1972/73 fishing season. The quota for the 1973/74 season, which began in the northern permit area on August 1, 1973, and in the southern permit area on September 15, 1973, was 135,000 tons, compared with the quota of the previous season of 110,000 tons.

Imports and Exports

U.S. imports of fish meal for January-May were lowest since the mid 1940's reflecting the unique situation prevailing in the market. Before the Peruvian anchovy crisis , United States imports of fish meal for January-May

Table 4.--U.S. exports of fish meal, by month, 1972-74

Month	1972	1973	1974
		Thousand short tons	
January	-	3.0	8.9
February	0.3	1.6	8.8
March	.3	2.6	1.1
April	.1	3.0	3.9
May	-	.5	1.9
June	.1	3.2	
July	.3	2.4	
August	.4	1.1	
September	1.9	.8	
October	1.7	3.5	
November	1.8	3.7	
December	3.6	11.3	
Total 1/	10.5	36.7	

1/ Figures may not add to total because of rounding.

averaged close to 200,000 tons and imports from Peru alone were about 160,000 tons. During January-May 1974, total imports were only 7,500 tons--further down from the previous year's 18,000 tons. There were no imports from Peru during the first 5 months of 1974. The major reasons for low imports in the United States were expectations for lower prices of fish meal in the later months, ample supplies of soybean meal at relatively low prices, and high asking price for Peruvian meal when it became available toward the end of the period.

Buyer resistance in the United States helped influence U.S. producers of fish meal to ship considerable quantities to West Germany where the market was strong. During January-May 1974, the United States exported about 24,700 tons of fish meal compared with 10,800 tons a year ago. Nearly all of these exports went to West Germany.

The United States was a net exporter of fish meal during January-May 1974. Exports exceeded imports by 17,200 tons. During the same period last year, exports of fish meal were about 1,300 tons less than imports (fig. 1). In earlier years, U.S. exports have been negligible in comparison to imports.

Table 5.--Production of fish meal in eight major exporting countries, 1971, 1972, and 1973

Country	Thousand metric tons			Percentage of total production		
	1971	1972	1973 1/	1971	1972	1973 1/
				Percent		
Angola	63	130	93	1.9	6.2	6.0
Canada	91	72	49	2.8	3.4	3.1
Chile	213	82	56	6.6	3.9	3.6
Denmark	235	221	220	7.3	10.6	14.2
Iceland	53	74	98	1.6	3.5	6.3
Norway	383	375	354	11.8	17.9	22.8
Peru	1934	897	411	59.6	42.8	26.5
S. Africa	272	244	272	8.4	11.7	17.5
Total	3244	2095	1553	100.0	100.0	100.0

1/ Preliminary.

Source: Fishmeal Exporters Organization.

World Production of Fish Meal

World production of fish meal in the first 4 months was up 8 percent from the same period a year ago, mainly because of Peruvian resumption of anchovy fishing. Fish meal production of the eight major producing countries was about 858,900 metric tons in January-April 1974 compared with 796,500 tons a year ago (table 6). Peru's production was 409,000 metric tons up 16 percent from a year ago. Fish meal production in Norway was down in January-April this year. Adverse weather and poor caplin run caused the decline. Production in May, however, was up from the year before.

Table 6.--Production of fish meal in eight major exporting countries. January-April 1973-74

Country	1973	1974	Percentage of total production	
			1973	1974
	Thousand metric tons		- - - - - Percent - - -	
Angola	37.0	23.0	4.6	2.7
Canada	8.5	9.4	1.1	1.1
Chile	24.0	46.0	3.0	5.4
Denmark	1/ 50.0	1/ 52.5	6.3	6.1
Iceland	74.0	1/ 88.0	9.3	10.2
Norway	155.0	99.0	19.5	11.5
Peru	352.0	409.0	44.9	47.6
South Africa	96.0	132.0	12.0	15.4
Total	796.5	858.9	100.0	100.0

1/ Estimated.
Source: Fishmeal Exporters Organization and Statistics Canada.

Peru's Anchovy Situation

Peru resumed anchovy fishing on March 5, 1974, after nearly a year's stoppage. Fishing ended on May 20 except for the southernmost port of Ilo, where small-scale fishing continued. The total catch in January-May 1974 was 2.2 million metric tons, including 135,000 tons of other species caught early in the year. The fishery will be closed until September or October when the next fishing season begins.

The approach to resume fishing was cautious. A quota of 700,000 metric tons was set first for March only, and about 350 boats, half of the active

fleet, fished 4 days a week. Fishing was very successful, and the Ministry of Fisheries subsequently announced a quota of 700,000 metric tons for April, and later 600,000 metric tons for the rest of the season. Thus the total anchovy quota for the first period of 1974 was 2 million metric tons.

The January-May catch of 2.2 million metric tons was about half of the catch during the same period before the anchovy crisis. About 429,000 metric tons of fish meal were produced in January-May 1974 compared with 1968-72 average of 1.0 million metric tons for the same period. Meal recovery was highly efficient. The anchovies were fat and good size, many 15 to 17 centimeters long. The fish meal yield reportedly averaged over 22 percent, compared to 20 percent in other years. Pesca-Peru, the Peruvian state fishing company, operated about 60 to 70 of the approximately 140 plants that operated before Pesca-Peru took over in May 1973. These plants are the most efficient ones in the best locations. This is one reason for the high yield of fish meal this season. Because of additional improvements in these plants, high yields and higher quality meal are expected in the future.

Table 7.--Exports of fish meal from FEO[1/] countries, 1971-73

Country	1971	1972	1973	Percentage of total exports		
				1971	1972	1973
	--- Thousand metric tons ---			--- Percent ---		
Angola	48	124	92	1.9	5.3	9.3
Chile	193	78	26	7.7	3.4	2.6
Iceland	59	72	92	2.4	3.1	9.4
Norway	338	390	325	13.5	16.7	33.0
Peru	1749	1528	351	70.1	65.4	35.6
S. Africa	109	143	100	4.4	6.1	10.1
Total	2496	2335	986	100.0	100.0	100.0

1/ Fishmeal Exporters Organization.

Table 8.--Exports of fish meal from FEO 1/ countries, January-April, 1973-74

Country	1973	1974	Percentage of total exports	
			1973	1974
	Thousand metric tons		- - - - Percent - - - - -	
Angola	35	21	14.4	8.8
Chile	4	23	1.6	9.7
Iceland	43	2/ 25	17.7	10.5
Norway	128	82	52.7	34.5
Peru	8	70	3.3	29.4
South Africa	25	17	10.3	7.1
Total	243	238	100.0	100.0

1/ Fishmeal Exporters Organization.
2/ Estimated

FEO Exports

The member countries of FEO exported about 238,000 metric tons of fish meal in January-April 1974 compared with 243,000 tons a year before (table 8). Although the total quantity was about the same in both years, the exports of individual countries had changed. A notable improvement took place in Peruvian and Chilean exports, whereas exports from Iceland and Norway experienced a sizable decline.

FEO Stocks

FEO countries held only about 178,000 metric tons of fish meal on January 1, 1974, slightly less than a year ago, but only 17 percent of the stocks on January 1, 1972 (table 9). Peru held only 38,000 tons or about 21 percent of the stocks in FEO countries at the beginning of 1974. Norway had the largest stocks, 85,000 tons on January 1, about 48 percent of the stocks of the FEO countries.

The fish meal stocks in FEO member countries were an estimated 624,500 metric tons on May 1, 1974, indicating a considerable improvement from the January 1 level and some increase from a year before (table 9A).

Table 9.--FEO 1/ fish meal stocks held January 1, 1972, 1973 and 1974

Country	1972	1973	1974	Percentage of FEO total stocks		
				1972	1973	1974
	Thousand metric tons			Percent		
Angola	17	20	14	1.6	10.8	7.9
Chile	43	17	15	4.2	9.2	8.4
Iceland	4	1	3	0.3	0.5	1.7
Norway	122	77	85	12.0	41.6	47.8
Peru	786	60	38	77.2	32.4	21.3
S. Africa	46	11	23	4.5	5.5	12.9
Total	1,018	186	178	100.0	100.0	100.0

1/ Fishmeal Exporters Organization

Table 9A.--FEO 1/ fish meal stocks held May 1, 1973 and 1974

Country	1973	1974	Percentage of FEO total stocks	
			1973	1974
	Thousand metric tons		Percent	
Angola	18.0	15.5	3.1	2.5
Chile	19.0	32.0	3.3	5.1
Iceland	29.0	2/ 40.0	5.0	6.4
Norway	95.0	3/ 101.0	16.3	16.2
Peru	385.0	3/ 347.0	66.3	55.6
South Africa	35.0	89.0	6.0	14.2
Total	581.0	624.5	100.0	100.0

1/ Fishmeal Exporters Organization
2/ Estimated
3/ Preliminary

Broiler Placements

Broiler production continued to gain in the early months of 1974, but experienced a drawback when the demand deteriorated rapidly during the second quarter of the year. About 1 billion broiler chicks were placed on farms in the leading broiler-producing states during January-April 1974--about 4 percent more than a year before. In May, however, placements dropped and were about 4 percent below a year ago (table 10).

Table 10--Broiler chick placements in 22 States, and average broiler price at the farm, by month

Month	1972		1973 1/		1974 1/	
	Chicks placed 2/	Broiler price	Chicks placed 2/	Broiler price	Chicks placed 2/	Broiler price
	Million	Cents/lb.	Million	Cents/lb.	Million	Cents/lb.
January	260.5	13.4	255.3	17.2	225.7	20.9
February	256.4	14.6	230.0	19.4	241.4	23.7
March	282.2	14.5	276.4	23.3	280.7	22.5
April	277.8	13.1	207.9	25.5	261.8	21.2
May	285.0	13.6	251.8	23.8	242.6	20.6
June	271.7	14.3	320.1	24.5		
July	259.8	15.7	196.7	26.4		
August	260.2	14.6	255.0	37.8		
September	229.6	15.5	238.0	30.3		
October	237.3	14.6	239.6	24.3		
November	239.9	13.8	240.1	19.4		
December	249.7	14.0	289.0	19.3		
Total placements and average price	3,110.2	14.3	2,969.9	24.3		

1/ 21 States, 1974 preliminary.
2/ Weekly broiler chick placements prorated between months.
Note: Figures may not add to total because of rounding.

Sources: Delmarva Broiler Chick Report, U.S. Department of Agriculture, Statistical Reporting Service, and Poultry and Egg Situation, U.S. Department of Agriculture, Economic Research Service.

Broiler prices at the farm in January and in February were above the prices of a year ago, but declined below last year's level in March and continued to drop towards the summer. The price decline resulted in reduction of profitability despite easing in the prices of soybean meal and fish meal. High prices of corn, which is a major ingredient in broiler feed, kept the feeding costs relatively high. Increased costs of shipping added to problem. According to the U.S. Department of Agriculture, the broiler-feed price ratio in March was less than a year ago.

Soybean Meal Price

Soybean meal is the major competitor of fish meal as a source of protein for animal feeding. Prices of soybean meal have dropped sharply from the record monthly average of $450 per ton in June 1973. The average price of soybean meal (50 percent solvent) at Decatur, Ill., was $130.40 per ton in April compared with $228.40 per ton a year ago (table 11). In May the average price declined further to $120 per ton. Because prices of soybean meal declined at a faster rate than prices of fish meal, the ratio of fish meal and the price of soybean meal was an all-time high during the first 4 months of 1974 (table 12 and fig. 2).

In May the ratio between the price of menhaden meal and the price of soybean meal averaged 2.28:1 compared with 1.32:1 a year ago and 1.75:1 two years ago.

Table 11.--Average monthly prices of soybean meal 1/ at Decatur, Ill., 1972-74

Month	1972	1973	1974
	- - - - - Dollars per short ton - - - - -		
January	89.40	210.40	192.40
February	91.50	240.00	175.25
March	98.60	224.90	160.40
April	101.80	228.40	130.40
May	103.30	346.60	120.00
June	104.90	450.00	
July	111.60	346.00	
August	111.00	316.25	
September	117.90	231.90	
October	118.60	175.60	
November	133.00	179.00	
December	195.00	223.00	
Average 2/	115.70	231.90	

1/ 50 percent protein, bulk.
2/ Average weighted by monthly production of soybean meal and cake.

Source: Feed Market News, U.S. Department of Agriculture, Consumer and Marketing Service, Grain Division.

Table 12.--Ratio of Peruvian fish meal price 1/ to soybean meal price 2/, by month, 1972-74

Month	1972	1973	1974
	- - - - - - Price ratio - - - - - -		
January	1.83	1.65	3/ 2.77
February	1.79	1.69	3/ 2.58
March	1.67	1.83	3/ 2.52
April	1.68	1.77	3/ 2.62
May	1.75	1.38	3/ 2.28
June	1.68	-	
July	1.62	1.43	
August	1.73	1.54	
September	1.65	3/ 1.96	
October	1.78	3/ 2.42	
November	1.74	3/ 2.43	
December	1.24	3/ 2.41	
Average	1.55	N.A.	

1/ F.o.b. East Coast ports, 65 percent protein, as quoted at New York City.
2/ Wholesale at Decatur, Ill., 50 percent protein, bulk.
3/ Ratio of menhaden meal price to soybean meal price.

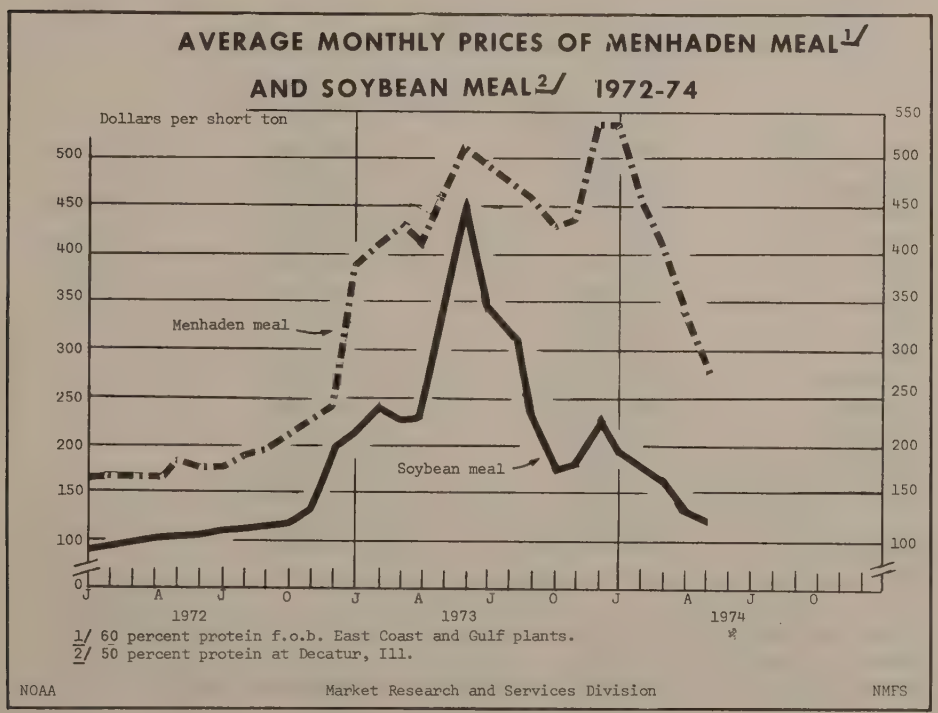

Figure 2

Fish Meal Prices

Lower prices of soybean meal and expectations of the recovery of Peruvian fish meal production were major factors exerting downward pressure on the prices of fish meal during January-May 1974. As indicated by the high ratio between fish meal price and soybean meal price compared to last year, the prices of fish meal have been relatively slow to follow the sharp decline in prices of soybean meal. This slowness was mainly due to continued short supplies of fish meal. Nevertheless, the price trend for menhaden fish meal has been a declining one since the end of 1973.

The average monthly price of menhaden meal, which reached a peak in December at $537.50 per ton dropped to $452.50 per ton in February 1974 and declined further to $273.10 per ton in May ($4.55 per unit of protein). The prices of tuna and mackerel meal, calculated on the basis of 60 percent protein content, declined less rapidly than prices of menhaden meal and averaged $281.25 per ton in May ($4.68 per unit of protein)--$8.15 per ton higher than the average price of menhaden meal for the same month (tables 13 and 15 and fig. 3). This price difference indicates that the West Coast forms a distinct

Table 13.--Average monthly price of menhaden meal 1/ f.o.b. East Coast and Gulf points, 1972-74

Month	1972	1973	1974
	Dollars per short ton		
January	164.70	2/ 389.50	2/ 532.50
February	165.00	2/ 410.10	2/ 452.50
March	164.70	2/ 424.10	403.75
April	168.20	2/ 409.50	342.00
May	181.10	457.50	273.10
June	175.00	508.10	263.00
July	178.50	497.10	
August	189.70	473.90	
September	193.90	456.60	
October	210.20	425.00	
November	227.50	2/ 436.25	
December	237.50	2/ 537.50	
Average 3/	185.50	478.58	

1/ 60 percent protein, bulk, as quoted by brokers at New York City.
2/ Nominal price.
3/ Average weighted by monthly production of menhaden meal.

regional market that uses local fish meal and meal imported mainly from Peru. Shortage of Peruvian meal and good demand for fish meal in January-May caused the unusually strong prices for tuna and mackerel.

Prices of California anchovy meal (65 percent protein) averaged $481 per ton in January. Prices declined gradually and the asking price in May was $309 per ton. At this price ($4.75 per unit of protein), however, the buying interest was very light.

Supplies of Peruvian fish meal were exhausted in the United States in January-April 1974, and prices were not quoted. Small quantities were offered in May by New York brokers at $300 per ton ($4.62 per unit of protein) f.o.b. West Coast.

Table 14.--Average monthly prices of Peruvian fish meal 1/ f.o.b. East Coast ports, 1972-74

Month	1972	1973	1974
	- - - - - Dollars per short ton - - - - -		
January	163.30	2/ 347.25	3/ -
February	163.60	2/ 406.25	3/ -
March	164.00	2/ 411.90	3/ -
April	171.50	2/ 405.00	3/ -
May	180.60	2/ 480.00	3/ -
June	176.10	3/	3/ -
July	180.90	493.75	
August	192.00	487.50	
September	194.90	3/ -	
October	210.80	3/ -	
November	231.00	3/ -	
December	241.00	3/ -	
Average 4/	179.20	451.70	

1/ 65 percent protein, bulk, f.o.b. East Coast ports.
2/ Nominal price.
3/ Supplies exhausted, no quotes.
4/ Average weighted by monthly imports of Peruvian fish meal.

Table 15.--Average monthly prices of tuna and mackerel meal 1/, at Los Angeles, 1972-74

Month	1972	1973	1974
	Dollars per short ton		
January	135.00	187.00	453.00
February	137.60	2/	390.00
March	135.00	360.00	301.88
April	138.40	390.00	274.50
May	142.80	393.80	281.25
June	147.80	468.75	
July	154.00	474.00	
August	172.50	480.00	
September	174.00	408.75	
October	176.40	309.00	
November	181.40	345.00	
December	187.00	455.62	
Average 3/	155.90	396.35	

1/ 60 percent protein, bulk, as quoted by brokers at Los Angeles.
2/ No quotes.
3/ Average weighted by monthly production.

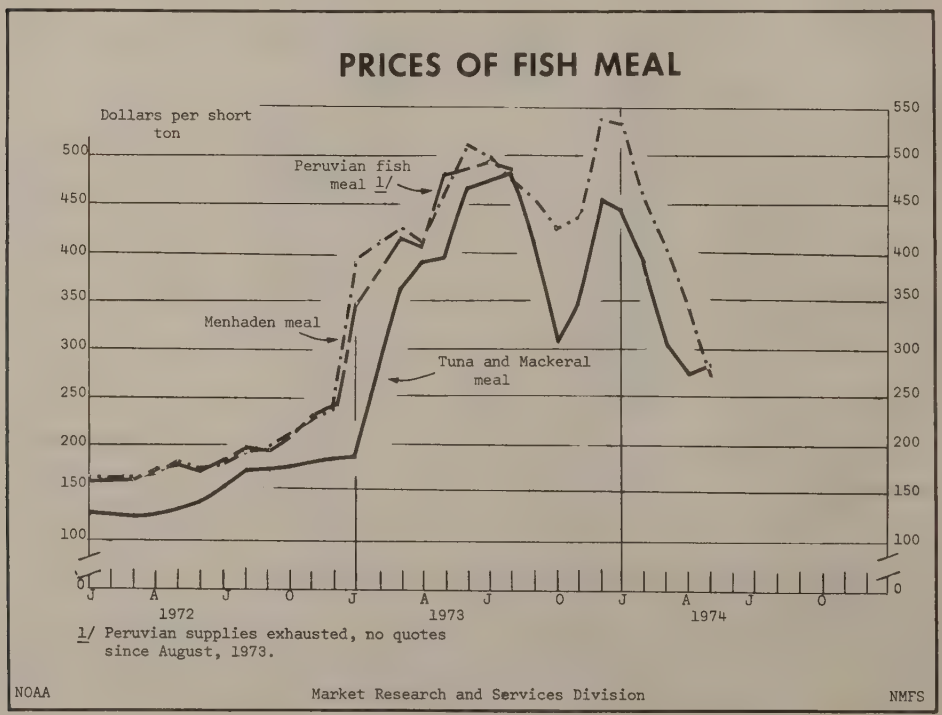

Figure 3

OUTLOOK

The Peruvian Marine Research Institute (IMARPE) surveyed the anchovy population at the end of May. Official results of the survey have not yet been released, and Peruvian sources indicate that another test will take place in August or September, after which the catch quota will be determined. If anchovy fishing will be permitted at the same level as in March-May 1974, the October-December quota would be about 2 million metric tons. Assuming the high production yield experienced in March-May fishing, Peru's production of fish meal for the rest of the year could be about 440,000 metric tons, about half of the 1967-71 average production for the comparable part of the season.

By the beginning of July, Peru had not sold fish meal to the United States. EPCHAP is asking about $300 per metric ton c&f Europe ($272 per short ton); although prices were not quoted for the U.S. market, the above price could be used as an indicator of the price level asked. EPCHAP would prefer the quotation in terms of c&f U.S. port over f.o.b. terminals where fish meal is treated for salmonella. It is important to note that the c&f quotation leaves the salmonella risk to the buyer.

It is unlikely that Peru can sell fish meal to the United States at the above price this year. The ratio of the EPCHAP asking price of Peruvian meal to the current price of soybean meal in the United States is about 2.75 to 1, and unless the price of soybean meal rallies again, EPCHAP has to reconsider the price of fish meal in order to sell it in the United States. As explained later in this outlook, we do not see such price increase for soybean meal this year.

As long as there is an adequate margin between the price of Peruvian fish meal and menhaden meal in European markets, U.S. exports of fish meal will continue. We believe that EPCHAP will lower the prices of fish meal enough to sell in European markets and consequently U.S. exports of fish meal will taper off towards the end of the year.

U.S. production of fish meal is expected to be higher in 1974 than in 1973. We estimate that the total production for 1974 will be about 280,000 to 290,000 tons.

Five boats were added to the Gulf menhaden fishing fleet this spring, and the NMFS Atlantic Estuarine Fisheries Center predicts that fishing effort will increase 8 to 10 percent in the Gulf menhaden fishery. Fishing effort in the Atlantic menhaden fishery in 1974 will remain about the same as in 1973 or increase slightly. With this fishing effort on Atlantic and on Gulf, the total catch of menhaden in 1974 is likely to be about 2 billion pounds (1 million short tons). Assuming that about 1,875 million pounds is used for reduction purposes--(an estimated 125 million pounds is used for bait)--and

that the processing yield of 20.8 percent will continue, menhaden meal production in 1974 would be about 195,000 short tons compared with 188,800 tons in 1973.

Production of tuna, mackerel, and anchovy meal has increased in recent years. Anchovy meal production in January-April this year was 29 percent above the most recent 5-year average (Jan.-April 1969-73) of 3,600 tons.

In the first quarter of the year, tuna receipts in the canneries were up 26 percent and fish meal production was up nearly as much during that time. On the basis of the relationship of January-April production to the annual production in the past 10 years, we estimate that the production of California anchovy and tuna-mackerel meal will be close to 65,000 tons in 1974.

With the addition of some 25,000 tons of fish meal from other species, the total estimate of U.S. fish meal production for 1974 is about 285,000 tons compared with 279,000 in 1973.

The soybean meal situation will have a notable influence on the use and prices of fish meal during the rest of 1974. U.S. soybean crop estimate for 1973-74 season suggests about 3-percent lower production than last year's record. However, due to large crop last season and large carryover this fall, U.S.D.A. projects that the production of soybean meal in the 1974-75 season will be 19.5 million tons, 3 percent above 1973/74.

Current prices of soybean meal at $100 to $120 per ton ($110 for 50 percent protein meal at Decatur, Ill., June 5, 1974) will probably hold for the rest of the year. Considering the impact of inflation, these prices compare favorably with the "normal" price level of soybean meal. The 1967-70 average price in current dollars equals about $120 per ton.

The price of menhaden meal June 17, 1974, was quoted at $265 per ton. The ratio of current price of menhaden meal to the current price of soybean meal is 2.40:1. The annual average ratio in 1969 was 2.10:1 and in 1970 2.12:1.

Assuming an average ratio for the rest of this year to be at about 2.30:1 and the average price for menhaden meal about $250 per ton for the rest of the year, we estimate that the use of fish meal in the United States in the second half of 1974 would be about 200,000 tons. The estimated supplies of fish meal for the first half of 1974 are about 85,000 tons, making the estimated use for the year about 285,000 tons--about the same as the estimated U.S. production of fish meal in 1974.

This estimated use for the second half equals an average of 3.2 percent fish meal in a broiler feed for 1.6 billion broilers, the amount of estimated placements in the United States in July-December (estimated on the basis that broiler on an average consumes about 7.75 pounds of feed). The use of fish meal should be higher at a lower average price of fish meal and/or at a lower ratio between price of fish meal and at the price of soybean meal.

Availability of imported fish meal at more favorable prices than used in the above estimate would naturally depress the domestic prices and increase the use of fish meal in feed rations. EPCHAP's price policy will thus influence fish meal prices also in the United States.

FISH SOLUBLES

REVIEW

Supplies

The total amount of fish solubles available for use in the United States in January-May 1974 was 24,700 tons--up 27 percent from the same period a year ago and 14 percent higher than in January-May 1972 (table 16). All but 10 tons of fish solubles available during the first 5 months of 1974 were from domestic production. Increased production of solubles was due to the higher production of menhaden meal this year. About 13,400 tons of menhaden solubles were produced in January-May 1974 compared with 8,200 tons a year ago.

Demand

Demand for fish solubles was relatively strong during January-May 1974. This is reflected in the fact that prices of solubles declined considerably slower than the prices of fish meal. Prices of menhaden solubles averaged $159.00 per ton in January, and the average price asked in May was $103.75 per ton (table 17 and fig. 4). On the basis price per unit of protein, solubles were a lower priced source of protein than fish meal.

OUTLOOK

Recent declines in the prices of feed ingredients have made the use of fish solubles less favorable than during the time of high prices of feed ingredients. We expect the soluble production to be higher than a year ago because of increased production of fish meal. At the same time the demand is expected to be slower than during the first half of the year.

Table 16.--Total fish solubles available in the United States: production plus imports, by month, 1972-74

Month	1972	1973	1974
	- - - - - - - Thousand short tons - - - - -		
January	2.4	.6	1.8
February	2.1	1.3	1.6
March	2.5	1.3	3.0
April	5.3	5.9	6.0
May	14.4	10.6	12.1
June	19.2	19.8	
July	21.7	25.9	
August	28.1	28.1	
September	12.9	18.4	
October	14.4	10.9	
November	8.3	8.4	
December	2.9	6.9	
Total 1/	134.4	137.9	

1/ Figures may not add to total because of rounding.

Data for 1973 and 1974 are subject to revision.

Table 17.--Average monthly price of menhaden solubles[1/], f.o.b. East Coast plants, 1972-74

Month	1972	1973	2/ 1974
	- - - - - - Dollars per short ton - - - - - -		
January	2/ 40.40	80.50	159.00
February	38.05	105.50	165.00
March	35.90	115.00	3/ 132.50
April	35.90	111.00	3/ 129.16
May	38.90	126.25	3/ 103.75
June	40.10	142.50	3/ 94.75
July	39.75	139.00	
August	40.60	133.75	
September	42.80	128.50	
October	52.75	3/ 125.00	
November	66.90	3/ 131.25	
December	72.50	3/ 150.00	
Average[4/]	43.45	134.88	

1/ In tank cars; prices quoted by brokers at New York City.
2/ East and Gulf Coasts.
3/ Asking price.
4/ Weighted average.

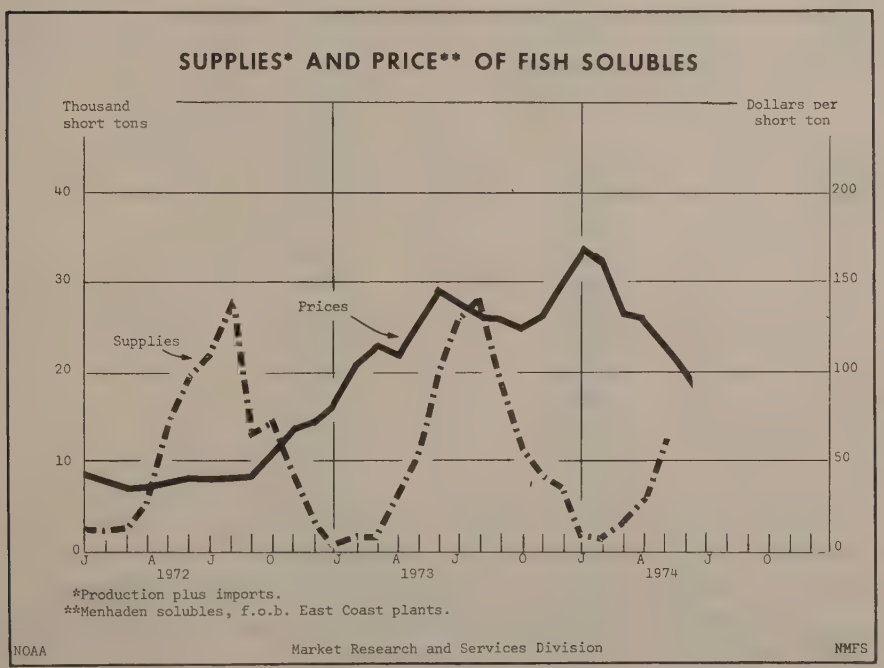

Figure 4

FISH OIL

REVIEW

SUPPLIES

Fish Oil Production

U.S. fish reduction industry produced 40.8 million pounds of fish oil in January-May 1974--up 69 percent from the year before (table 18). Most of the increase was attributed to the increased production of menhaden oil. Menhaden oil production was 35.7 million pounds in January-May 1974 compared with 19.5 million pounds a year ago. The production of anchovy, tuna, and mackerel oil was also higher during the first 5 months of 1974 than last year; about 3.6 million pounds were produced compared with 3.0 million pounds a year ago. In January-May 1974, production of oil from unclassified species declined in comparison to the previous year.

Table 18--U.S. production of fish oil, by month, 1972-74

Month	1972	1973	1974
	Million pounds		
January	1.4	0.4	1.1
February	0.9	.4	1.0
March	.7	.6	1.0
April	4.8	4.7	7.0
May	30.8	18.1	30.5
June	28.0	37.2	
July	32.6	58.5	
August	45.5	50.9	
September	23.2	30.2	
October	15.2	15.3	
November	4.3	4.6	
December	1.2	3.7	
Total 1/	188.4	224.6	

1/ Figures may not add to total because of rounding.
Data for 1973 and 1974 are subject to revision.

U.S. Use of Fish Oil

The U.S. use of fish oil in January-May 1974 was 13.6 million pounds, up 32 percent from the year earlier (table 19). About 34 percent of fish oil was used in paint and varnish. Other uses included production of fatty acids, resins and plastics, and lubricants. Exceptionally strong demand for vegetable oils this year is associated with the increased use of fish oils.

Exports

U.S. exports of fish oil in January-May 1974 were lowest in 9 years. Only 16.5 million pounds were exported compared with 30.1 million pounds during the first 5 months of 1973 (table 20). The main reason for low exports

Table 19.--Industrial use of fish oil in the United States, by month, 1972-74 1/

Month	1972	1973	1974 2/
	Million pounds		
January	1.9	2.5	2.0
February	2.5	2.0	2.6
March	2.1	1.9	2.3
April	2.0	1.8	3.4
May	2.3	2.1	3.2
June	2.2	2.1	
July	3.5	2.4	
August	3.7	3.1	
September	2.6	1.8	
October	2.6	1.6	
November	2.4	2.0	
December	2.2	2.0	
Total 3/	30.0	25.3	

1/ Includes marine mammal oil other than sperm oil and some hydrogenated fat (vegetable and animal) a d other fats and oils in process.
2/ Preliminary.
3/ Figures may not add to total because of rounding.

were exhausted supplies at the end of 1973 and in the first 3 months of 1974. Exports increased again when menhaden fishing began. Exports in May were 12 million pounds compared to only 1 million a year ago.

PRICES

Prices of Fish Oil

High domestic and foreign demand for fish oil and competing oils resulted in sharply increased prices during the first 5 months of 1974 in comparison to a year ago. The average monthly price of menhaden oil, as quoted by brokers in New York City, reached a record high of 25.7 cents per pound in April (table 21). A year before, the price was 10.85 cents a pound and the April average in 1972 was 6.4 cents per pound. Because of advance sales, domestic supplies of menhaden oil were exhausted in May and prices were not quoted during that month. Some menhaden oil was available in June at 25 cents per pound.

Table 20.--U.S. exports of fish oil 1/, by month, 1972-74

Month	1972	1973	1974 2/
	- - - - Million pounds - - -		
January	14.0	6.5	2.3
February	10.3	11.0	1.1
March	0.7	11.1	0.7
April	.9	0.5	0.4
May	5.3	1.0	12.0
June	11.0	25.2	
July	38.3	6.4	
August	2.0	72.6	
September	32.4	26.2	
October	38.0	59.2	
November	6.4	17.5	
December	33.8	11.7	
Total 3/	193.2	248.8	

1/ Excluding whale oil.
2/ Preliminary.
3/ Figures may not add to total because of rounding.

Table 21.--Average monthly prices of menhaden oil 1/ f.o.b. East Coast plants, 1972-74

Month	1972	1973	1974
	Cents per pound		
January	7.35	8.75	21.00
February	6.85	2/ 9.60	21.25
March	6.50	2/ 10.25	23.70
April	6.40	10.85	25.70
May	6.95	11.65	4/ -
June	6.80	3/ 11.85	25.00
July	6.90	11.70	
August	7.30	3/ 11.50	
September	7.80	3/ 11.50	
October	8.70	4/ -	
November	8.80	4/ -	
December	8.90	4/ -	
Average 5/	7.25	11.64	

1/ Crude oil in tank cars; prices quoted by brokers at New York City.
2/ Nominal price.
3/ Asking price.
4/ Supplies exhaused, no quotes.
5/ Weighted average.

Table 22.--Average monthly price of tuna and mackerel oil 1/ at Los Angeles 1973-74.

Month	1973	1974
	Cents per pound	
January	5.50	7.08
February	5.10	9.00
March	5.50	12.00
April	5.75	2/
May	6.28	11.00
June	6.72	11.00
July	6.73	
August	6.88	
September	6.97	
October	6.35	
November	6.50	
December	6.91	
Average 3/	6.46	

1/ Crude oil, f.o.b. plant; prices quoted by brokers at Los Angeles.
2/ Supplies exhausted, no quotes.
3/ Weighted average.

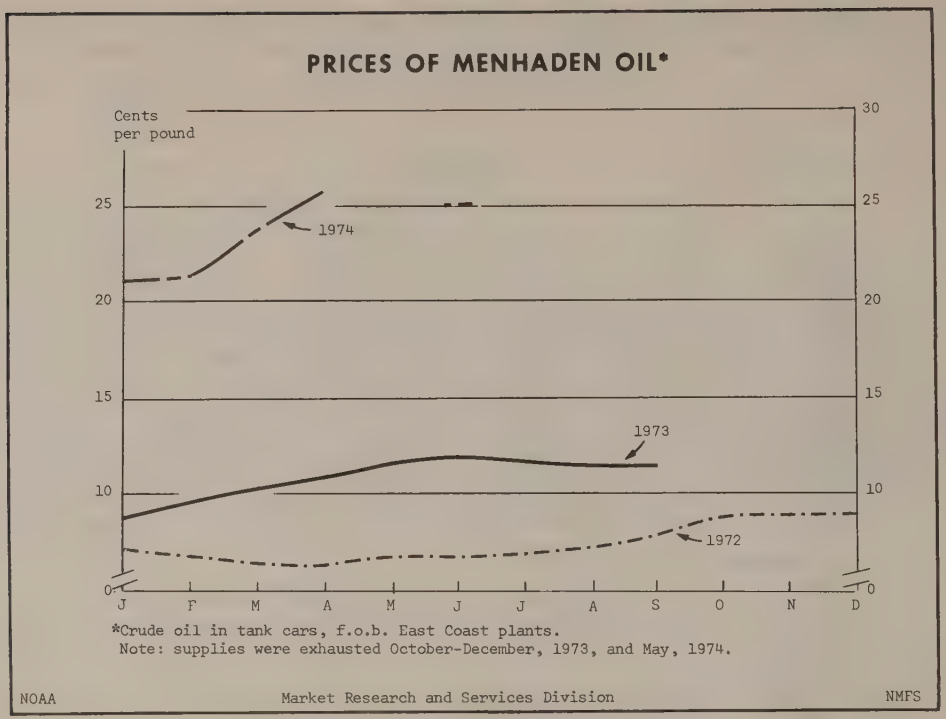

Figure 5

OUTLOOK

We estimate that U.S. supplies of fish oil will be nearly 250 million pounds in 1974, about 10 percent higher than in 1973. Increased menhaden fishing effort and relatively high yield during the early months of 1974 production support the estimate. Fish oil price also appears to influence production because high prices tend to be associated with high production. World demand for food oils appear to continue relatively strong in comparison to supplies. Sluggish markets for soybean meal have slowed somewhat the crushings and kept the supplies of soybean oil from depressing the price. Inventories of fish oil in both exporting and consuming countries are still relatively low despite Peru's return to production. World consumption of margarine and shortening is expected to continue to increase this year. Because of these reasons, it appears that the world demand for fish oils will continue to be high and U.S. exports of fish oil are expected to be high and prices favorable, especially before October. Soybean crop and Peru's anchovy fishing will have a great influence on the fish oil market during the last quarter of the year.

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